

Additional chart coverage may be found in CATP2, Catalog of Nautical Charts. $SECTOR~\red{7} \longrightarrow CHART~INFORMATION$

SECTOR 7

HISPANIOLA—HAITI AND THE DOMINICAN REPUBLIC

Plan.—This sector describes the coastline of the island of Hispaniola which consists of the Republic of Haiti and the Dominican Republic. The descriptive sequence is from W to E. Navassa Island is also described in this sector.

General Remarks

7.1 Hispaniola, the second largest island of the West Indies, lies between Cuba and Puerto Rico. The island is about 360 miles long from W to E, with a maximum width of about 140 miles.

The Dominican Republic occupies about two-thirds of the island and the Republic of Haiti occupies the remaining third.

The island is traversed by three distinct mountain formations, all of which have a general E and W direction, with many large and fertile plains between the ranges. The mountains are richly and heavily timbered, making the island the most fertile in the West Indies.

Large scale chart coverage for U.S. territory located within this sector is provided by the National Ocean Service. Regulations pertaining to navigation within U.S. territorial waters may be found in NOS Coast Pilots, while additional regulations will be cited in the text along with the navigational feature they affect.

Winds—Weather.—The main source of climate and current conditions affecting Hispaniola are the trade winds. South of 15°N, and over the islands of the Greater Antilles generally, the prevailing winds are NE to E, with NE winds common in autumn and winter and NE to E in spring and summer. North winds appear in winter, SE winds occur frequently in summer and W winds on Hispaniola's W side are possible throughout the year. Local variation takes place principally because of an interplay between general conditions and the more particular conditions arising from land and sea breezes.

Weather conditions are a function of geography, the blocking effect of interior mountain ranges and prevailing trade winds with the result that Hispanola's N side has typically a more marine climate than the S and W side.

North coast temperatures are rather milder 26° to 31°C, than those on the S side 28° to 34°C. Temperatures in the interior highland may occasionally fall to near freezing.

Rainfall varies considerably as to place and time. Along the N coast, precipitation increases from W to E. Along the S coast it increases E to W. The W coast has the least precipitation. The N coast has the least amount of rain from June to August, while the S and W coast minimum rainfall occurs from December to March.

Tides—Currents.—Ocean currents affecting the Hispaniola coast are largely the result of the wind driven clockwise flow circulating around the North Atlantic basin. This flow, the North Equatorial Current sets generally W.

Upon reaching the Caribbean it branches such that one part veers NW and N as the Antilles Current, passing N of

Hispaniola while the other branch, continuing through the lesser Antilles, passes S of the island.

Currents on the S side of Hispaniola set W with several notable exceptions due to coastal configurations and wind variations.

Fresh N or S winds often precede an E setting countercurrent between Cabo Beata and Isla Saona. An E setting countercurrent is common between Baie des Cayes and Cabo Falso while a SE setting current is occasionally encountered between Pointe Grande and Pointe a Gravois.

The area where countercurrents and prevailing currents meet exhibit surface agitation, particularly remarkable near Point a Gravois and Carbo Beata.

Hispaniola W side currents are unique in that they are not directly affected by the prevailing trade winds which are predominated only N of Cap due Mole, but rather a consequence of influence exerted by land sea breezes and tidal action.

In general, the set is counterclockwise, W in and through Canal du Sud, NW through and out of Canal de Saint-Marc, then SW to merge with the current setting WSW through the Windward Passage.

A strong N setting current passes close off Cap a Foux while strong tidal currents exist between Pointe de la Platform and Baie des Gonaives.

Signals.—Vessels in an emergency or wishing to enter Dominican Republic ports, may contact the Port Captain or the Dominican Republic Navy through the Agua Maria Primera port radio station.

Caution.—Aids to navigation for Hispaniola are reported to be unreliable, particularly the Haitian lighted aids.

Navassa Island

7.2 Navassa Island (18°24'N., 75°01'W.) lies about 30 miles W of the W extremity of Hispaniola and is reported to be radar conspicuous at 20 miles. The island is faced throughout by white cliffs that rise directly out of the sea.

Lulu Bay, a small indentation on the SW side of Navassa Island, is the safest place to make a landing.

Tides—Currents.—A current, with a rate of 1 to 2 knots, sets along the SW side of the island in a NW direction, changing to W at the last of the E tidal current.

Regulations.—Navassa Island is a reservation administered through the Commander, Seventh Coast Guard District.

Landing or entry on the island is prohibited, except under permit signed by the Commander, 7th U.S. Coast Guard District, Brickell Plaza Building, 909 SE 1st Avenue, Miami, FL. 33131-3050.

Anchorage.— Good anchorage may be obtained in depths of 29m, 0.4 mile offshore, with the NW tangent of the island bearing 000° and the SW tangent bearing 120°. The holding ground at the anchorage is good, but a heavy swell rolls around the S side of the island.

Anchorage may also be taken W of Lulu Bay in charted depths of 26m, with the former light bearing 080° and about 0.7 mile distant, over a coral and sand bottom, bottom quality unknown.

Caution.—Mariners are reminded that charted depths in the close vicinity of Navassa Island are based on very old information and cautioned that, while depths increase considerably farther offshore, several shoal water dangers are reported to exist between the island and the W side of Hispaniola.

West Coast of Hispaniola—Haiti

7.3 The W coast of Hispaniola, between Cap Mole and Cap Tiburon, about 107 miles SW, describes for the most part a large coastal indentation or gulf which, trending well inland, creates to the N and S two disproportionately elongated peninsulas that give Hispaniola its characteristic lobster's claw appearance.

The coastal terrain consists generally of rugged, scrub-covered to well forested hills rising inland to mountain summits, of which Morne Bonhomme is the highest, and includes several comparatively extensive low-lying coastal plains.

Caution.—Lights in Haiti have been reported extinguished or unreliable and buoys are frequently out of position.

7.4 Golfe de la Gonave (19°17'N., 73°00'W.), entered between Pointe de la Platform and Cap Dame Marie, a distance of about 86 miles, is quite deep throughout and steep-to in its rise to land areas or to shoal water coastal banks fronting Baie des Gonaives, filling Baie de Port-au-Prince and obstructing much of the area about Presqu'ile des Baraderes. Ile de la Gonave, the principal offshore land feature, is very hilly and lies such that passages to the head of the gulf lead either N of the island through Canal de Saint-Marc or S through Canal du Sud.

Baie du Mole (19°49'N., 73°23'W.), marked by a light on its SE portion, lies on the NW extremity of Hispaniola, and is entered between Cap du Mole and Cap Saint Nicolas, 1.7 miles S. The town of Le Mole stands on a flat, sandy point, on the S side of the inner part of the inlet. The head of the inlet, which extends NNE above Le Mole, is known as Baie Carenage.

Anchorage.—Anchorage is impracticable throughout much of Baie du Mole, particularly in the entrance, because of considerable depths. Baie Carenage has good shelter for deepdraft vessels, but the swinging room is limited.

Vessels anchor close off the N side of the bay in 12.8 to 18.3m in a position NW of Le Mole with fortifications fronting the town bearing 160° and the ruins of a warehouse NE of the town bearing 100°. The anchorage is open to winds out of the W and has a holding ground that is both uneven and foul. It has been reported (1992) fair to good.

A good anchorage for small vessels is NE of the town, in depths of 22m. Care must be taken when entering the inlet to avoid submarine cables which run W and WNW from a position 0.1 mile S of Fort St. George.

Cap Saint Nicolas to Port Au Prince

7.5 Cap Foux (19°46'N., 73°27'W.) is a bold headland, faced with steep cliffs above which high land rises, and is located 3 miles SW of Cap Saint Nicolas. A detached rock, 4.6m high, is located close to the cape.

There is a cove with a sandy beach where landing can be effected, in moderate calm weather, 0.2 mile N of Cap Foux. The bottom can clearly be seen in depths of 18.3 to 22m in this cove.

The coast between Cap Foux and Pointe de la Platform, 10 miles S and E, is steep-to and consists of bold, white, perpendicular cliffs. Anchorage may be obtained by small craft, in depths of from 4.6 to 6.4m, in Platform Bay, W of Pointe de la Platform.

Tides—Currents.—Close inshore along this stretch of coast, the current sets strongly N, while 6 miles offshore it will be found setting generally W or WSW.

7.6 Baie de Henne (19°39'N., 73°13'W.), about 9 miles E of Pointe de la Platform, is a small, deep-water and quite steep-to coastal indentation. The bay affords anchorage to vessels with local knowledge, but the bottom is irregular and it is not recommended.

The village of Henne stands at the head of the bay. It is reported that a prominent church with a belfry and masonry cross, stands in the vicinity of the village.

Baie de Port-a-Piment is a small cove, having shelter for small vessels and lies about 12 miles ESE of Baie de Henne.

An extensive bank fronts the coast between Baie de Porta-Piment and Pointe Lapierre, 16 miles SE. It has been reported that anchorage may be obtained on this bank, in depths of 31m, clean bottom, with Pointe Corridon bearing 318° and Pointe Lapierre bearing 093°. A light is displayed from Pointe Lapierre.

Gonaives (19°27'N., 72°42'W.) lies at the head of Baie des Gonaives, which is entered between Pointe Lefevre and Pointe Verreur. The bay is small, unencumbered, and somewhat deep. The land on the N side of the bay entrance is high, while on its S side the land is low.

Morne Bienac, a bold prominent hill 1.5 miles N of the town, is easily identified. The church in the town is conspicuous and makes a good landmark.

The port is reported closed to shipping.

Anchorage.—Baie des Gonaives, although open to the W, has good anchorage, particularly in Baie Grammont, where moderate sized vessels of suitable draft lie well sheltered in 6 to 8m, mud bottom. The best anchorage for deep-draft vessels is in depths of 11 to 12.8m, mud and sand, with the conspicuous white bluff, located 1 mile ENE of Pointe Lefevre, bearing 000° and the town church bearing 087°. All cargo operations take place at the anchorages.

Directions.—The bay is entered with a conspicuous rocky cliff on the SE of Morne Bienac ahead bearing 058°, which leads to the deep-draft anchorage mentioned above.

Caution.—Caution is advised, as E of the anchorage depths shoal rapidly.

7.7 Baie de la Grande Pierre (Grand Pierre Bay) (19°18'N., 72°45'W.) lies 8 miles S of Baie des Gonaives.

The bay is shoal over much of its inner reaches and encumbered at each entrance point by shoal water spits of sand and mud. Tide rips often occur off the N entrance point. Vessels anchor in 11.6 to 12.2m, mud, in a position with the S entrance point of the bay bearing 220° and a village located farther E bearing 122°.

Mariners are cautioned that the shore fronting this area is continually changing under the influence of sedimentary deposition and that shoaling may occur farther seaward than charted.

Pointe Table au Diable (Devil Point) (Pointe Diable) (19°13'N., 72°48'W.) lies 14 miles S of Pointe Lapierre and consists of a steep faced cliff. The point forms the NW extremity of a steep-sided mesa or small isolated plateau that rises abruptly at the seaward edge of extensive inland mud flats. The plateau is conspicuous from the N and S, where at a distance it appears as an island.

7.8 Saint-Marc (19°07'N., 72°42'W.) lies at the head of Baie de Saint-Marc, 6.5 miles S of Pointe Table au Diable. The twin spires of the cathedral in the town is a good landmark.

The port has been reported closed to shipping.

Anchorage.—The usual anchorage is about 0.2 mile W of the S end of town, in depths of 55m. Vessels are moored, heading W, with their sterns secured to anchors buried in the beach, the shore being steep-to between the shoal heads. The anchorage is dangerous in strong W winds. The anchorage should be approached with the summit of Morne a Vigie bearing 090°.

The port has two small piers. Small vessels of suitable draft can lie alongside these piers. In most cases cargo is handled at the anchorage.

Approaches to Baie de Port-au-Prince

7.9 Ile de la Gonave (18°51'N., 73°03'W.), a large mountainous island, lies about 20 miles SW of Baie de Saint-Marc. The island, when seen from the NW, appears as two rounded hills. The shores of the island consist mainly of long stretches of sandy beach interrupted by fields of mangrove. The two principal exceptions to this generally low-lying shore is the area NE of Pointe Ouest, the W extremity of the island which rises steep-to in abrupt sea cliffs, and Pointe Fantasque, the ESE extremity of the island which consists of a conspicuous white bluff on the seaward face of a rather hilly peninsula. Lights are displayed from Pointe Ouest and Pointe Fantasque. A stranded wreck is located 1.5 miles ESE of Point Fantasque near the Ilot Fregate de Croissant.

Grand Baie (18°43'N., 72°48'W.) is an indentation in the coast between La Grande Point and Petit Gonave islet, 2 miles SSW. It is well-protected, but the holding ground is poor and there are many coral heads.

Anchorage, exposed to E winds, is available but local knowledge is necessary.

Caution.—A danger circle unexploded ordnance was reported (1991) (PA) in position 19°16.9'N, 73°26.5'W, located NNW of Pointe Ouest.

Canal du Sud

7.10 Canal du Sud (Chenal Gonave) (18°40'N., 73°05'W.), oriented E to W between Ile de la Gonave and the mainland to the S, is a somewhat extensive body of water which has considerable depths throughout. Banc de Rochelois, consisting of several rocky heads and a bank with depths of less than 20m extending 11 miles SW of Ile de la Gonave, obstructs the channel. Currents in the channel are reported to set generally to the E.

Banc de Rochelois (18°38'N., 73°12'W.), lying centrally within Canal du Sud, is a small, rather steep-sided seamount that lies surmounted by a shoal and an irregularly surfaced plateau of sand and scattered sunken dangers. Les Pirogues are small rocks located near the middle of the bank, and nearby are others which barely dry. A light is shown on one of the Les Pirogues. Roche Vandalia, a dangerous rock, is located within the bank SSE of Les Pirogues.

Vessels should pass either N or S of Banc de Rochelois, but in doing so they are reminded to proceed with caution at all times and to give its several dangers a wide berth.

Canal de Saint-Marc

7.11 Canal de Saint-Marc (18°55'N., 72°50'W.), entered between Pointe de Saint-Marc and Ile de la Gonave's N side, is a sparsely surveyed, rather deep water passage, having on its steep-to insular mainland side, for a distance of 17 miles to Pointe du Trou Forban, a rugged and mountainous terrain that rises rapidly close inland.

The SE portion of the passage shelves rapidly between Pointe du Trou Forban and Ile de la Gonave SE extremity, where above and below-water dangers extending well into the passage from each point, considerably narrows its navigable width. Currents through the passage reportedly set NW.

Les Arcadins (18°48'N., 72°39'W.), about 4 miles SSW of Pointe du Trou Forban, consists of three islets of which the middle and largest is flat and largely barren, while the other two are bushy. All are reported to be good radar targets. A light is shown from the middle islet.

Anchorage may be obtained in depths of 21.9m, with the light in line with the NE islet bearing about 237°, and the latter distant about 1.5 miles.

Recifs Arcadins, with depths of less than 5.5m and with depths of less than 1.8m in places, lie 2 miles offshore, 2.7 miles ESE of the light. The depths between the islets and the reefs, and between the reefs and the coastal reef, are very irregular.

Baie de Port-au-Prince

7.12 Baie de Port-au-Prince (18°40'N., 72°30'W.) is entered between Pointe du Trou Forban and Ca Ira. The approach to the bay can be made either N or S of Ile de la Gonave. The city and port of Port-au-Prince is located at the SE corner of the bay. The bay is fronted in each of its approaches by considerable depths that shoal rapidly to a steep-to shelf or bar which in turn joins Pointe du Trou Forban and the mainland coast at Ca Ira with Ile de la Gonave SE

extremity. The N side of the bay has several sheltering bights while the S side is of no real interest.

Arcahaie (18°46'N., 72°31'W.) is a village located on the N side of Baie de Port-au-Prince, 8 miles SE of Pointe du Trou Forban. The village church is prominent from offshore.

Anchorage.—Anchorage may be obtained 0.5 mile offshore, in depths of 27.4m with the village bearing 304°, but a 12.8m patch lies close SE of this position. Five anchor berths, designated S7 through S11, are available and are best seen on the chart.

7.13 Pointe de Boucassin (18°43'N., 72°27'W.) lies 4.5 miles SE of Arcahaie. A village of the same name stands 1 mile ESE of the point. Ile a Cabrit, close inshore, lies 4 miles SE of Pointe de Boucassin.

The island is not easily identified. There is a boat passage between the island and the coast. A white cement factory, with conspicuous chimneys, stands near the coast 1 mile N of Ile a Cabrit.

A finger pier extends seaward from the factory. The pier, 91m long with a depth alongside of 6m, is used by vessels of 20,000 grt. Pilots and a tug are available at Port au Prince.

Rade de Foso (18°40'N., 72°23'W.), entered between Pointe de Boucassin and Pointe de Cul de Sac, 8 miles SE, affords good anchorage in depths from 12.8 to 33m, but depths within the bight are irregular. A depth of 10.5m is charted about 1.2 miles SE of the tank on Ile de Cabrits.

Lafiteau (18°41'N., 72°21'W.), contains a flour mill. A T-shaped jetty extends 210m SW from the coast, 1.3 miles ESE of Ile a Cabrit. The head of the jetty, 21m long, with dolphins off each end, has a least depth of 8.5m alongside. Two mooring buoys lie NW and two lie SE of the jetty head. Range lights, in line bearing 044.5°, lead through a channel, with a least depth of 14m, to the jetty.

A pilot is available at Port-au-Prince.

Anchorage may be obtained in the SW part of Baie de Portau-Prince, off Ca Ira, in a depth of 18.3m, but several shoal patches lie within 0.5 mile of the coast. Six anchor berths, designated S1 through S6, are available and are best seen on the chart.

Port-au-Prince (18°33'N., 72°21'W.)

World Port Index No. 10880

7.14 Port-au-Prince, lying on the SE side of the head of Baie de Port-au-Prince, is the administrative and commercial center of the Republic of Haiti. It is a medium sized city with a well laid out harbor.

Winds—Weather.—The weather for the area is nearly always calm except for certain times of the year. From May to November, occasional strong winds may interrupt normal loading and discharging operations.

A light breeze from the E or NE blows after dawn, but in the afternoon a breeze three times stronger blows in the opposite direction.

Tides—Currents.—The mean rise of tide here is 0.3m. Currents in the port are almost negligible, except that, when mooring or unmooring a vessel, one should pay attention to a N current of 0.2 knot.

Depths—Limitations.—The depth in the harbor is 6.1m and up to 8.5m alongside the S part of the pier. Caution is to be used when approaching from August to November.

Three piers with 6.1 to 8.5m, 5.4 to 6.7m, and 2.1 to 3.6m alongside are available.

The inner harbor on the N side of the pier is dredged to a depth of 10.7m, and is able to accommodate three vessels including container ships.

A finger pier, which is an extension of the existing pier, is 243.8m long and can accommodate two cruise ships (one on each side) up to 20,000 tons each. The depth alongside is 9.1m.

A new port, N of the Old Pier, has been completed and is operational. This pier can accommodate three vessels, particularly container ships.

Various oil company jetties are available for tankers. One pier handles propane gas for Tropigas.

Aspect.—The most prominent landmark from seaward is the two masts of the radio station, situated on the NE side of the town. A light is shown on each mast. A conspicuous house, with a large buff-colored chimney, stands NE of the radio station.

A light is occasionally shown from the house. The cathedral, a white stone building with two conspicuous towers, stands 0.3 mile SW of the radio station. A conspicuous tower stands about 0.4 mile WNW of the cathedral.

The palace, a large and very white building with a dome, is situated S of the cathedral. Fort National, with a flagstaff, is situated on the summit of a hill, 0.2 mile S of the radio station, and can easily be identified by its white walls and the zigzag road that leads to it.

The ruins of Fort Bizoton, situated on the S side of the bay, 2.5 miles WSW of the cathedral, is reported to be a good landmark. A power station stands near the ruins. A radio tower, marked by red lights, stands 3 miles SSE of the cathedral. A lighted range for entry into the Navy Yard at Bizoton is in line bearing 183°. This range has been reported (1994) to be not visible.

The leading range for the harbor entrance consists of the N tower of the cathedral, marked by a light, and the SW corner of Fort National, also marked by a light in line bearing 104°.

A square monument, 27.4m high, painted cream, blue and red, stands on the range line about 0.4 mile WNW of the cathedral

Pilotage.—Pilotage is compulsory for all movements of ships in the port. The pilot boards to the W of the Fairway Buoy and is accompanied by port officials. Pilotage is available from 0530 hours to 2100 hours except Sundays and holidays.

Vessels should pass their ETA and request for pilotage through Curacao (PJC) to APN, the port authority, at least 24 hours prior to arrival.

Both the pilots and the port may be contacted via 2182 kHz or VHF channels 16, 14, 13, 12, or 11.

It has been reported that the pilot may be summoned by 3 blasts of the ship's whistle.

Anchorage.—The quarantine anchorage is located near the intersection of the two ranges, and may best be seen on the area chart. Charted depths range from 14.7 to 27m, bottom quality unknown.

An anchorage for vessels with a draft of over 10m, within Anchorage Area D is charted with the light shown from the cathedral bearing 109°, 2.5 miles distant. A depth of 8m is charted about 0.2 mile ENE of this position.

Anchorage is prohibited in an area off main wharf, best seen on the chart. Eleven designated anchorage areas from A to L inclusive, best seen on the area chart, are located near the NE and S shores of Baie de Port-au-Prince.

Directions.—If approaching by Canal de Saint-Marc, steer to pass about 5 miles SW of **Pointe de Montrovis** (18°57'N., 72°44'W.) and about 2.7 miles SW of Les Arcadins, and to the range line. A vessel approaching by Canal de Sud should approach as safe navigation permits, keeping at least 1 mile offshore of Pointe Lamertin.

Caution.—Mariners are cautioned that numerous small fishing boats may be encountered between Ile de la Gonave and the SE head of Baie de Port-au-Prince.

In addition, submerged nets and traps are marked by floating bamboo stakes which are difficult to see and pose a hazard to a vessel's propellers.

The forenoon haze may obscure Baie de Port-au-Prince's inner part entrance range at distances greater than 4 miles, with the result that the most favorable time to enter is either in the afternoon or at dawn just before the lights of the range are extinguished.

Vessels are urged to consult the local authorities for information on recommended anchorages for this port.

Port-Au-Prince to Cap Dame Marie

7.15 Baie du Petit Goave (18°26'N., 72°53'W.) lies about 32 miles WSW of Port-au-Prince, and is entered between Pointe des Roches and Pointe Antoine, 2 miles W. The bay is open to the N, and the depths are considerable and irregular, but it affords anchorage off the town of Petit Goave in depths of 22 to 37m.

Ile des Poules, a sandy islet, lies on the E side of Baie du Petit Goave. It is surrounded by shoals that nearly block the passage between it and the shore, and at HW in calm weather, can be distinguished only by occasional breakers. A lighted buoy marks a rocky bank 0.5 mile W of the islet.

Petit Goave (18°26'N., 72°52'W.) (World Port Index No. 10870) lies on the E side of Baie du Petit Goave, S of Ile des Poules. Cargo operations consist of lighterage of cargo to ships at the anchorages.

Pilotage is compulsory and pilots board vessels at the entrance to the bay. The town church is prominent. There is a small pier abreast the custom house, with a depth of 2.1m alongside. A coffee mill is found on the S shore of the bay.

It is recommended that a vessel enter the bay with the coffee mill bearing 175°, and when the church in the town bears 085°, it should be steered for on that bearing to the anchorage.

Baie de Miragoane (18°28'N., 73°05'W.) lies about 11 miles W of Baie du Petit Goave. The bay is protected by a narrow reef, almost dry in places, that extends 2 miles E from position close off the W entrance point.

A ridge, with depths from 5.5 to 11m, extends 1.5 miles farther ENE. A depth of 7.6m was reported on this ridge.

A lighted buoy is moored about 3.2 miles E of the W entrance point of the bay.

There is a least depth of 12.2m in the fairway of the passage between the E extremity of the reef and the E shore; the bottom is plainly visible, but in calm weather with an unfavorable light it is difficult to distinguish.

The channel is marked by orange beacons in line bearing 233°.

7.16 Miragoane (18°27'N., 73°06'W.) (World Port Index No. 10860) lies at the head of Baie de Miragoane. Lighters are used to handle cargo to and from ships at anchor in the bay.

Depths—Limitations.—A pier, which extends for 174m in a NE direction from the shore, is located 1 mile W of a conspicuous church. The pier has a T-head, 45m long, and the berth is extended about 100m in each direction by dolphins.

There is a mooring buoy at each end of the berth in which there is a depth of 10.7m. This pier accommodates ships up to 10,000 grt and has been built by the Reynolds Company for the shipment of bauxite in bulk.

There is one small jetty for loading and discharging general cargo, with a maximum depth of 5.4m.

Aspect.—A beacon stands on the pierhead. A silver colored oil tank, with a red diamond, stands WNW of the beacon. When both are in line they bear 292.5° and lead to the pierhead following a turn from the entrance range. Buoys mark the dangers in Baie de Miragoane and can best be seen on the area chart.

Pilotage.—Pilotage is compulsory. The pilot boards vessels at the entrance to the harbor. Vessels may sail from the harbor without a pilot.

Anchorage.—Anchorage is available with good shelter throughout Baie de Miragoane, in depths of 14.6 to 18.3m. Limited anchorage can also be obtained in the inner harbor, in depths up to 12.8m. A ship awaiting a pilot can obtain anchorage in the vicinity of the lighted buoy. Vessels can anchor S of Caye Baice, but the swinging room is limited.

7.17 Baie des Baraderes (18°32'N., 73°37'W.) is entered between Petit Trou de Nippes and Pointe Bec, 4 miles NW. The bay is encumbered with shoal patches and coral heads, but a least depth of 11m can be carried to the SW end of the bay. A winding deep-water passage leads through the entrance reef and into the bay from position close S of Grand Boucan.

Riviere Baraderes flows into the bay 1.2 miles SE of Rum Cay. Anchorage may be obtained 1 mile N of the mouth of Riviere Baraderes, in depths of 14.6 to 18.3m, mud bottom. The town of Baraderes is located about 2 miles up river from its mouth. Small boats can ascend to the town.

Grande Cayemite (18°37'N., 73°45'W.), an island two miles off the coast, lies about 8 miles NW of Baie des Baraderes. A light is shown on the N extremity of the island. Baie des Garcons (Cayemites Baie) lies between Grande Cayemite and the mainland coast S of it.

Depths in the bay are irregular and it only affords indifferent anchorage. The W part of the bay is encumbered with shoals and reefs, on some of which are islets that can best be seen on the area chart.

The E entrance to the bay is most widely used. There is a least depth of 5.8m through two narrow channels at the inner end of the E entrance. A passage from the N into the bay is seldom used, and then only by small craft with local knowledge.

7.18 Jeremie (18°39'N., 74°07'W.) lies on the W side of Baie de Jeremie, about 18 miles W of Grande Cayemite.

The port has been reported closed for shipping.

The ruins of a fort stand on the N entrance point of the bay, and an isolated red house stands 0.2 mile NW of the fort. The clock tower of the cathedral, 0.2 mile W of the fort, is conspicuous.

There is a small pier at the N end of the town. It has been reported (1995) that, due to shoaling, the maximum draft which can be accommodated along the W side of the S face of the pier is 2.4m.

Pilotage.—Pilotage for Jeremie is compulsory. Vessels embark pilots, with prior arrangements, in a position about one mile offshore.

Anchorage.—Anchorage may be taken in depth of 8.8m with the town pier bearing 273°, a conspicuous white cliff bearing 233°, and the ruins of the fort bearing 294°. The holding ground is good, but a vessel should always be ready to proceed to sea at short notice, as strong NE winds fill the bay with breakers and the anchorage becomes unsafe.

Northers arise without warning, though it is reported that they are sometimes preceded by an atmospheric condition of extreme visibility, when the SE end of Cuba is seen. A current of sufficient strength to swing a vessel against the wind is sometimes experienced.

Cap Dame Marie (18°37'N., 74°26'W.) is the NW extremity of the long narrow peninsula that forms the S part of Haiti. A light is shown on the cape. The cape has been reported to be a good radar target up to 21 miles.

Faux Cap, similar in appearance to Cap Dame Marie, lies close S.

Cape Dame Marie to Cap Tiburon

7.19 Between Cap Dame Marie and Cap Tiburon, 16 miles S, a bank defined by the 200m curve extends up to 12.5 miles offshore. This bank has irregular depths, generally less than 36.6m, and a least reported depth of 9m located 18 miles WSW of Cap Dame Marie. The water is so clear that the bottom is plainly visible.

Vessels should use caution as fish traps, marked by buoys, may be present.

Anchorage may be obtained anywhere off the coast between Cap Dame Marie and Cap Tiburon, but the bays are all exposed to W winds and are sometimes unsafe from September to March when NW winds may occur.

Baie de la Dame Marie (18°35'N., 74°26'W.) is entered between Cap Dame Marie and Pointe Rousselin, 3.5 miles S. Good anchorage, sheltered from offshore winds, may be obtained by vessels with local knowledge almost anywhere in the bay, not less than 0.3 mile offshore. The most convenient berth off Petite Riviere is in depths of 9.1m, with Cap Dam Marie bearing 000° and Twelve Apostles bearing 112°.

The village of Petite Riviere is situated in the NE part of the bay, and Dame Marie in the S part. Twelve Apostles is a conspicuous white cliff about midway between the villages. Two more villages lie in the bay with a conspicuous white cliff between them.

7.20 Baies de Nault (18°29'N., 74°28'W.), about 8 miles SSW of Cap Dame Marie, consists of several shoal water indentations lying between the rock-fringed promontory Pointe Bourry and Pointe de l'Hopital, 1.2 miles S, Anse d'Hainault, about half way between the two entrance points, is a seashore community. Vessels are advised to anchor in 10m, in a position near Pointe Bourry with the center of Anse d'Hainault bearing 108°.

Pointe Fanchon (18°26'N., 74°29'W.), the W extremity of Hispaniola, is a bold reef-fringed headland that first rises abruptly from the sea then slopes more gradually inland to mountainous terrain. A small bay S of the point has anchorage for vessels with local knowledge.

Cap des Irois, 1 mile S of Pointe Fanchon, is a low-lying point that rises abruptly from the sea with a facing of rocky cliffs, and continues inland to a remarkable hill which appears as an island from well offshore. It is reported to be good radar target up to 25 miles. The cape may be rounded closely, but a depth of 11m was reported 4 miles WSW.

Cap Tiburon (18°21'N., 74°26'W.) is a prominent headland faced with abrupt white cliffs that rise directly out of the sea, and thereafter slope rapidly upward for a distance of 1.2 miles inland to Mont Tiburon.

A large white patch, close SE of Cap Tiburon, is a landmark and reported to be visible at 22 miles.

Cap Tiburon to Pointe L'Abacou

7.21 Between Cap Tiburon and Pointe l'Abacou, about 43 miles ESE, the coast immediately inside a shoreline of numerous small bays and coves consists generally of rather narrow coastal plain having beaches of sand and gravel that are frequently interrupted throughout by low-lying sea cliffs.

Close inland, the terrain rises to rugged hills and farther on to mountains. The offshore area in this section of coastline is sparsely surveyed, but a shoal water coastal bank extends offshore for a distance of 1 mile or so.

Baie de Tiburon (18°20'N., 74°25'W.), lying close SE of Cap Tiburon, is a shoal water coastal indentation fronting on a small plain confined within surrounding hills. A village is situated in the SE corner of the bay. Shoals, with depths of less than 5.5m, extend about 0.2 mile off the SE part of the bay. Anchorage may be taken in depths of 9.1 to 11m with Pointe de Bourgaux bearing 181°, distant 0.2 mile, but there is no shelter from W or SW winds.

The numerous coves and bays ESE of Baie de Tiburon, as far as Pointe a Gravois, are open to winds from the S which commonly send in a heavy sea. Small vessels anchor along this section of coast, but only with the use of local knowledge.

7.22 Port Salut (18°05'N., 73°55'W.) lies almost 3 miles NNW of Pointe a Gravois. There are a number of houses and a large church in the village. Northwest of the church is a distinctive white cliff. Small craft with local knowledge anchor close to the beach. Large vessels anchor in depths of 20.0m, 1.5 miles offshore.

A sandbank, with depths of less than 5.5m, extends 0.5 mile offshore for a distance of 3 miles in the vicinity of the port. A

low island, connected to the shore by a sand spit, lies a short distance off a point, 2 miles NNW of the port.

Pointe a Gravois (18°02'N., 73°54'W.), about 3 miles SSE of Port Salut, is steep-to, heavily wooded, and faced with cliffs. It has been reported to be a good radar target up to 16 miles. The coast, for a distance of 6.7 miles to Pointe l'Abacou, consists of low-lying sea cliffs backed by flatlands which rise to nearby high hills. This part of the coast is fronted by a narrow coastal reef which has several openings available to small vessels with local knowledge.

Baie des Cayes

7.23 Baie des Cayes (18°07'N., 73°45'W.) is entered between Pointe l'Abacou and Manchon de Cavaillon, 12 miles NNE. A bar connects the head of the bay to the NW point of Ile a Vache. Other than the bar, depths of less than 10m are found throughout the bay and are best seen on the area chart. Canal du Sud and Canal de l'Est lead from the sea past the island of Ile a Vache and into the bay.

Ile a Vache (18°04'N., 73°38'W.), lying on the E side of Canal du Sud, is low-lying on its E side and heavily wooded and higher on its W side, with a number of small hills that appear as islets from a distance. A light is exhibited from the E end of Ile Vache, 9.5 miles S of **Pointe Pascal** (18°13'N., 73°33'W.).

The S coast is fringed with a reef that extends from 0.2 to 0.5 mile offshore. Recif de la Folle extends N for about 5 miles from the E end of Ile a Vache.

The outer edge of the bank may be identified by an almost constant ripple.

Tidal currents are strong NE of Ile a Vache. The flood sets W with considerable strength over Recif de la Folle, such that vessels are advised to keep at least 2 miles distant. To the N and NW of the island, tidal currents set NW on the flood and SE on the ebb. Ocean currents combining with tidal currents often set through Canal de l'Est and Baie des Cayes and out through Canal du Sud.

7.24 Les Cayes (18°11'N., 73°44'W.), lying on the N side of Baie des Cayes, is a transshipment center for the lightering of cargo to vessels lying offshore at anchor.

The port is reported closed to shipping.

Canal de l'Est has a least depth of 12.8m, and is the better approach fairway.

A channel over the bar, connecting Ile a Vache to the shore, connects Canal du Sud to Canal De L'Est and Rade Aux Cayes. This channel, S of Grand Recif, is about 1 mile wide and has a least charted depth of 6m.

Anchorage.—Anchorage is available within Rade aux Cayes, a sheltered roadstead, about 1.7 miles SW of Manchon de Cavaillon, where vessels anchor in 18.3 to 20.1m, in a position with the ruins of Tourterelle Battery bearing between 271° and 293°, distant about 1 mile.

Anchorage may be obtained near the port, S of Tourterelle Battery, in depths from 7.3 to 14.6m. There are numerous shallow patches of coral in the area.

Baie de Cavaillon (18°13'N., 73°41'W.), located about 4 miles NE of Les Cayes, is entered between Manchon de Cavaillon and Ile du Carenage, 1.5 miles NE. The E side of the

bay is covered with mangroves. A river flows into the head of the bay and is used by small boats to reach a town 4 miles upstream.

Grand Baie du Mesle (18°13'N., 73°37'W.) lies 3.5 miles E of Baie de Cavaillon, and is entered between Pointe Pauline and Pointe Boyer, 1.5 miles E. There are white cliffs at Pointe Saint Rom, 0.5 mile NE of Pointe Pauline, and also at the head of the bay. A river flows into the NE corner of the bay. The bay has depths of 21.9 to 25.6m in its entrance, and from 9.1 to 11m in the inner part, where they shoal gradually to the mouth of the river.

The bay is exposed to the S, but the holding ground is good and anchorage may be obtained in its NE part.

7.25 Baie de Saint-Louis (18°14'N., 73°33'W.) lies about 4 miles ENE of Grand Baie du Mesle, and is entered between Pointe Pascal and La Pointe Nicolas (Pointe Bonite), 1.7 miles ENE. The bay affords good shelter though open to the S. Medium-sized vessels find excellent anchorage either close W or N of an unnamed islet, which is the site of a fort in ruins and lies near the town of Saint-Louis du Sud at the head of the bay.

The W side of the bay is clear of dangers, but the E side is encumbered with shoals.

Caye Orange (18°13'N., 73°32'W.) lies on the E side of the entrance to Baie de Saint-Louis. It consists of two hillocks on its NW end. Ilet Moustique lies about 0.5 mile E of Caye Orange, and is surrounded by a reef that extends 0.4 mile NW from it. Caye Rat lies 0.3 mile N of the SE end of Caye Orange. The area between these three cays is foul in most places.

7.26 Baie des Anglaise (18°14'N., 73°27'W.), lying to the E of Baie de Saint-Louis, is a broad coastal indentation or bight, open to the S though partially sheltered by the several islets fronting it. Large vessels may anchor in the bay; the holding ground is good. The best protection is afforded in the E part of the bay, N of the W part of Grosse Caye. Three passages lead into the bay. Recifs du Kansas, a sunken danger usually marked by breakers, lies on the E side of the westernmost of these passages bounded on the W by Ile Moustique. The other two passages lead close E of Caye Ramier and between the rocky islet Ile Regale and Grosse Caye. Ilet Anguille is a rocky, bush covered islet, on which the sea usually breaks, lying 0.7 mile NNW of Ile Regale.

Baie d'Aquin is a largely landlocked shoal water indentation. The S entrance lies between Pointe Mourne Rouge and Grosse Caye, 1 mile W. The entrance is obstructed by Ile Diamant, which may be passed on either side. The bay may also be approached from Baie Anglaise, but is recommended for daylight use only. A shoal spit is charted as extending about 0.7 mile N of Grosse Caye, while depths of less than 5.5m extend about 0.5 mile S of a point on the mainland N of Grosse Caye.

7.27 Aquin (18°16'N., 73°23'W.) (World Port Index No. 10830) lies on the W side of the head of Baie d'Aquin.

The port has facilities for the lightering of cargo to vessels lying at anchor in the bay. The usual anchorage is in depths of 7.3m in the NW part of the bay.

Pilotage.—Pilotage is compulsory. Vessels embark pilots upon prior arrangements, either off Les Cayes or off the several entrances to Baie d'Aquin.

Baie d'Aquin to Baie de Jacmel

7.28 Between Baie d'Aquin and Baie de Jacmel, about 49 miles to the E, the coast consists of a largely uninterrupted range of rugged, generally scrub-covered, hills that rise immediately behind a narrow coastal plain which extends as far as the town of Cotes de Fer.

Thereafter, it decreases considerably in width and continues on as a ribbon-like trace of land faced by low-lying cliffs in various colors.

Cap Bainet (18°09'N., 72°45'W.), about 37 miles E of Baie d'Aquin, may be identified by some white hillocks that surmount the cliffs there. A village is located at the head of a small bay close E of the cape. The bay has a fine sandy beach, but landing is difficult because of a heavy sea that breaks on the beach.

Baie de Jacmel (18°13'N., 72°32'W.) lies about 12 miles ENE of Cap Bainet and is entered between Cap Jacmel, marked by a light, and Cap des Marechaux, 2 miles NE. The bay is a small indentation surrounded by brush and rugged hills which dominate much of the shore seaward of a narrow river plain backing the head of the bay. It is clear of sunken dangers and quite deep throughout, but open to the SE. The bay may be identified by a conspicuous mountain formation which, lying to the E and somewhat to the N, drops precipitously from its higher E ridge to its lower W ridge. Pilotage is available. Vessels embark pilots about midway within Baie de Jacmel, but must remain 0.5 mile offshore until pratique is granted. A conspicuous church with two red-roofed towers stands at the head of the bay.

7.29 Jacmel (18°14'N., 72°31'W.) (World Port Index No. 10820) lies on the N side of the bay. The port has facilities for the lightering of cargo to ships at anchor. Three stranded wrecks, best seen on the chart, mark the inner port area.

The best position for anchoring is off an old fort with the church bearing about 025°, but the edge of the bank is so steep that vessels must be prepared to anchor immediately on getting into anchorage depths.

A vessel, 104m length, anchored with the church bearing 021° and Cap de Marechaux bearing 129°, in a depth of 9.1m, mud bottom. A vessel mooring should arrange to head about 155°, in order to lie head-on to the swell that usually rolls into the bay.

Caution.—The hydrography shown on the plan of the bay is from older surveys, and has been radically adjusted to conform to the shoreline.

Baie de Jacmel to Cabo Falso

7.30 The coastline between Baie de Jacmel and Cabo Falso, about 54 miles ESE, describes a gentle arc having no significant indentations. A sparsely surveyed, but apparently steep-to shoal water insular shelf fronts the entire coast and extends irregularly seaward for distances of up to 5 miles.

Cayes Jacmel (18°14'N., 72°23'W.), a small coastal town, lies 8 miles E of Baie de Jacmel. A rocky reef, with several openings available for small craft with local knowledge, skirts the coast between Cayes Jacmel and Pointe du Fournier, 2 miles W. The principal opening is fronted by an islet.

Baie de Bella-Anse (18°14'N., 72°03'W.) lies 19 miles E of Cayes Jacmel. The town of Bella-Anse stands on the W side of the head of the bay. Small vessels, with local knowledge and drawing not more than 4.6m, may anchor close off the head of the bay in sand and mud. Larger vessels anchor in 13 to 15m about 1 mile offshore; however, the holding ground is poor. The bay is open to the S and dangerous during hurricane season.

Riviere Pedernales (Rio Pedernales) enters the sea about 15.7 miles NNW of Cabo Falso where it marks the S extremity of the boundary between Haiti and the Dominican Republic. Pedernales, a Dominican town, stands on the SE side of Riviere Pedernales. A pier, 152m, with depths of 4.3 to 5.2m at its head, is situated W of the town. A light is shown about 1 mile E of the mouth of the river. Anchorage may be obtained in depths of 9.1m, 1 mile S of the mouth of the river.

7.31 Cabo Rojo (17°54'N., 71°40'W.) (World Port Index No. 11075) lies 9 miles SE of the mouth of Riviere Pedernales. The cape is a low-lying salient point having its S side faced by dark cliffs that rise directly from the sea. A conspicuous water tower stands about 1 mile ESE of Cabo Rojo.

A deep-water anchorage is available immediately outside the port. Contact the pilot for the best location.

A privately owned pier, used for shipments of bauxite and limestone, is 100m long with two mooring buoys.

Vessels enter through a buoyed channel. Both the pier and the channel are reported to be dredged to a depth of 10.6m. Vessels berth starboard side to and shift fore and aft so as to position hatches under stationary loading chute. The entrance to the channel is marked by a lighted buoy. The pilot boards S of this lighted buoy, by day only.

The pilot can be contacted 2738 kHz or VHF channel 16. An accurate ETA is important, because the pilot must come from Barahona, about 2 hours away. No entry or departure at night is allowed.

Vessels anchor with a good scope of chain in 5.5 to 12.8m, poor holding ground, in position with Cabo Rojo bearing 158°, distant 2 miles.

Winds at the loading facility are predominantly out of the E. They begin early in the forenoon, blow throughout the day, subside at sunset and generally remain calm throughout the night.

If strong out of the E and full on the beam, they can inconvenience vessels loading cargo.

Winds out of the W are rare and seldom violent, but if they persist for two or three days, they send in a swell which can cause a berthed vessel to pitch almost 1m.

7.32 Bahia de los Aguilas (17°50'N., 71°39'W.) lies about 5 miles SSE of Cabo Rojo and is entered between Punta de las Aguilas and Punta Chimanche, 3 miles S. The shore of the bay consists of coarse sand and gravel, behind which steep cliffs rise to a moderate height. The bay affords good shelter from E winds, but is exposed to the W.

Bahia Agujas (17°47'N., 71°40'W.), entered between Punta Chimanche and Cabo Falso, 3.2 miles SW, affords anchorage in depths of 9.1 to 14.6m, near the middle of the bay, with shelter from winds between the N and SW through E. The depths decrease gradually towards the beach at the foot of high cliffs, which extend along the entire shore. There is good anchorage for small craft in the S part of the bay.

Ensenada de los Puercos (17°44'N., 71°32'W.), a broad bight, lies between Cabo Falso and Cabo Beata, 18 miles ESE. Steep cliffs, which are particularly remarkable at Cabo Falso, face much of the N side of the bight as far as Punta de Acecho; marshes and swamps characterize much of the remainder of the bight to Cabo Beata.

Offshore, a steep shoal water bank of sand and coral fronts Cabo Falso and then curves around the bight to Cabo Beata, where it reaches out to the SW and provides a shelf from which the islands of Isla Beata and Isla Alto Velo emerge.

7.33 Isla Beata (17°35'N., 71°31'W.), lying 3 miles WSW of Cabo Beata, is hilly and largely covered with brush and scrub. The island is separated from the mainland by Canal de la Beata, which for the most part is shoal, and a heavy sea and swell are usually present. A tower stands on the NW side of the island. Cabo Beata is marked by a light.

Isla Alto Velo (17°29'N., 71°38'W.), about 15 miles SW of Cabo Beata, is a high, steep-sided rocky islet which is reported to be a good radar target up to 19 miles.

A light is shown on the summit of the islet. A depth of 11.2m was reported about 4 miles ESE of the light.

Anchorage is available close off the W side of the islet. Anchorage is also available off an old pier on the NW side of the islet in depths of 12.8 to 20.1m with a flagstaff bearing 089°, distant 0.5 mile.

Canal de Alto Velo, the passage between Isla Alto Velo and Isla Beata, is deep and free of dangers. In 1992, depths of 65, 14, and 11m were reported within the canal passage between the two islands. Usually there is a heavy swell, both in the canal and on the bank E of Isla Alto Velo. The trade winds are frequently strong as they are deflected S through the passage by high mountains within the mainland interior to the N.

Los Frailes (17°37'N., 71°41'W.) lies 9 miles NNW of Isla Alto Velo. From a distance it appears as a group of sharp-peaked, rugged rocks with white tops. A light is shown on Los Frailes.

Between Cabo Beata and Bahia de Neiba, about 40 miles NNE, the coastline is quite regular without any noteworthy indentation and, being a lee shore to prevailing wind and sea, without any sheltering anchorage.

The offshore area consists of a shoal water narrow shelf that drops off seaward to considerable depths.

Inland, the terrain is conveniently divided into two largely equal parts, consisting first of flatlands and followed by mountains.

Bahia de Neiba (18°15'N., 71°02'W.) lies about 40 miles NNE of Cabo Beata and is entered between Punta Avarena and Punta Martin Garcia, 8 miles NE. The bay is roomy and consists mainly of deep water. Punta Martin Garcia is reported to be visible up to 20 miles and is a good radar target up to 29 miles.

The inland terrain on each side of the bay is high, rugged, and scrub-covered, while the terrain at the head of the bay is low and swampy.

7.34 Puerto Barahona (18°12'N., 71°05'W.) (World Port Index No. 11070) lies on the SW side of Bahia de Neiba. The approach channel was reported to be dredged to a depth of 10.7m on the entrance range.

Depths—Limitations.—Berth No. 1 is 209m long and was previously used for loading sugar in bags, but is no longer used for cargo handling. It is usually occupied by the Dominican Navy and fishing vessels. Berth No. 2 is 152m long and also mostly used by the Dominican Navy and small fishing vessels. Berth No. 3 is 152m long and used for loading gypsum in bulk.

The Salt and Gypsum Mines Company maintains a gypsum export terminal at this particular pier. Berth No. 4 is 146m long and used exclusively by the sugar mill for exports of sugar and molasses.

Pilotage.—Pilotage is compulsory. The pilot can be contacted on 2738 kHz or VHF channels 12 and 16. The pilot boards from a small tug approximately 1.5 miles outside the port. The best time for berthing is between 0600 hours and 0930 hours, when the wind is light. An ETA should be sent 24 hours in advance, confirming 12 hours prior to arrival.

Anchorage.—The outer anchorage is 0.2 mile SE of the above-water part of Arrecife Piedra Prieta, in depths of 12.8 to 14.6m. The inner part has anchorage by draft, but vessels must moor bow and stern on account of limited swinging room. Contact the pilot for best locations.

7.35 Puerto Viejo de Azua (18°20'N., 70°50'W.) (World Port Index No. 11060) lies on the W side of Bahia de Ocoa and is entered E of Cayo Puerto Viejo island, at the E extremity of which is a precipitous white faced bluff which is a good landmark, especially from the E.

A light is shown on the E end of Cayo Puerto Viejo island.

A detached bank, with depths of less than 11m and with a least depth of 7m, lies in the middle of the approach to the entrance. The entrance is about 0.5 mile wide, and two arms of deeper water, with 5.5m and deeper, extend about 1 mile N and NW, respectively, from the entrance.

A channel, marked by buoys, was dredged to a depth of 10.7m from the entrance to the head of the N arm where there is a wharf. This channel passes W of a 4.5m detached shoal, lying nearly in mid-channel, WSW of the entrance point.

Depths—Limitations.—A concrete finger pier, 200m long, has a ramp for ro-ro vessels on the W side. This port is rarely used except by LPG tankers. The largest vessel reported to berth was 152.5m long with an 8.2m draft.

Pilotage.—Pilotage is compulsory. The pilot boards the vessel about 0.5 mile from the sea buoy. Contact can be established on VHF channel 16. It has been reported pilots are available only during daylight hours.

Anchorage.—A vessel can obtain anchorage in depths of 11m in the E of the two deeper arms, NE of the detached coral reef, but it is exposed S. Anchorage may be obtained in depths of 9.1m in the W of the two deeper arms, SW of the detached coral reef, but it is exposed to the SE. The bottom of both anchorages is fine coral and mud and is hard.

7.36 Bahia de Ocoa (18°22'N., 70°39'W.) is entered between Punta Martin Garcia and Punta Ocoa, 22 miles E.

The bay contains several anchorages, especially on its E side where they are well sheltered from the prevailing winds, but the bottom is sand and loose stones and anchors drag easily. This side of the bay is affected by the prevailing winds, which at times raise a heavy sea. The shores of the bay are fringed with narrow sandbanks, which extend a short distance offshore.

Puerto Tortuguero (18°25'N., 70°42'W.) lies in the NW corner of Bahia de Ocoa, W of seven prominent cliffs. Pilotage is compulsory for the port. The pilot boards just outside the port. Ships are berthed only during daylight. Puerto Tortuguero is the port for the town of Azua, 3 miles inland. The town is an important center of the sugar industry. The pier in the port is 198m long and was reported to have depths of 10.7m alongside.

Anchorage may be obtained in a depth of 16.5m with the pier bearing 315°, distant about 1 mile. Vessels can anchor closer in on the same bearing in less water. A heavy sea sets into the anchorage at times.

7.37 Las Calderas (18°13'N., 70°31'W.) (World Port Index No. 11050), near the head of Bahia de Las Calderas, is a small town and the site of a major naval air station. The bay is small and mostly landlocked. The bay is entered between Punta Matasola and Punta Calderas, about 1 mile S.

Punta Calderas is a low tongue of sand at the NE end of a peninsula which is flat and for the most part consists of salt ponds, the remainder being partly covered with brushwood and palm trees.

Anchorage may be obtained off the entrance to Bahia de Las Calderas, in depths of 18.3 to 25.6m, about 0.2 mile NW of Punta Calderas and the shore SW of it. This anchorage should not be used during the hurricane season.

The E and W inner anchorages have depths of 9.1 to 12.8m. To reach the E inner anchorage, a ridge, with a least depth of 4.3m in the fairway, must be crossed.

Caution.—Navigation is prohibited within the bay and for as much as 10 miles seaward without permission from Dominican Naval authorities.

Punta Salinas (18°12'N., 70°34'W.) lies 1.7 miles SW of Punta Calderas and shows a light. The point is low, sandy, and partially covered with bushes. The sea breaks over it with E winds.

Punta Salinas to Santo Domingo

7.38 The coast between Punta Salinas and Punta Catalina, about 19 miles E, is fringed with low bushes. There are several bays between these two points which afford open anchorage. There is anchorage from 2 to 3 miles offshore at Agua de la Estancia, 6 miles W of Punta Catalina. This anchorage serves the town of Bani, 3.2 miles inland.

Two red lights are shown 2 miles S of the town.

Puerto Palenque (18°14'N., 70°09'W.) (World Port Index No. 11065), situated on the W side of Punta Palenque, affords anchorage in 12.8m, but there is only room for one vessel. Cargo is lightered from the port to the anchorage. A light is shown from Punta Palenque.

7.39 Punta Palenque Oil Terminal (18°13'N., 70°10'W.) (World Port Index No. 11046), an offshore oil terminal consisting of a single lighted mooring buoy, lies 2.5 miles WSW of Punta Palenque.

The buoy is moored in 24.7m and is associated with a submarine pipeline laid to the shore. Vessels up 259m long and drawing 14.6m can be accommodated. No mooring is available in the harbor.

Two large silver tanks, 2 miles WNW of Punta Palenque, were reported to be conspicuous both visually and on radar.

Ships should inform the authorities of their ETA by telex before leaving their last port. Messages can be sent via Santo Domingo Piloto (HIA) or Curacao (PJC).

Pilotage.—Pilotage is compulsory. The pilot boards 1 mile SW of the buoy. Contact Punta Palenque pilots. Pilot should be contacted 6 hours prior to arrival on VHF channels 14 or 16, with a follow up call to the terminal 45 minutes prior to arrival on VHF channel 16.

Pilots for Puerto Palenque can be obtained from Santo Domingo.

7.40 Puerto de Haina (Rio Hana) (18°25'N., 70°01'W.) (World Port Index No. 11045) lies about 14 miles NNE of Punta Palenque at the mouth of the Rio Haina. The harbor basin is formed by two breakwaters.

Two conspicuous chimneys, which show red lights, stand 0.2 mile NNW of the root of the W breakwater. The lights on these chimneys are visible from seaward for about 20 miles. There is an obstruction about 0.7 mile SE of the harbor entrance.

The river discharge increases during the rainy season (May to September) and current flow can reach a velocity of 2.5 knots; the seasonal deposition of silt requires periodic dredging to maintain adequate depths.

Range lights are exhibited from framework towers with conspicuous orange daymarks. The front lies about 0.5 mile NNE of the two conspicuous chimneys. Earlier reports indicate that the leading lights did not lead through the best water in the entrance channel, and it was reported that the leading marks appear to put the vessel to the E side of the channel.

The entrance channel is 65m wide between the shoals off the breakwater heads and have a reported least depth of 9m; it is marked by lighted buoys. Large concrete blocks from the ruined breakwaters obstruct each side of the channel on and close outside the lines joining the lighted buoys.

Stranded wrecks lie close W and ESE of the head of the W breakwater.

Depths—Limitations.—Berth No. 1 West (sugar berth) is 190m long, with a depth alongside of 9.1m.

This berth has a mechanical bulk sugar loading facility and is also frequently used by tankers discharging fuel and diesel oil to shore tanks.

Berth No. 2 West is 113m long with, an 8.5m depth alongside, and is used for the discharging of general break-bulk and containerized cargo. Tankers also use this berth to discharge distillates to shore tanks. The berth is not very well protected and may be dangerous when there is a heavy swell.

Berth No. 3 West is 181m long, of which only 110m can be presently used for berthing due to the state of disrepair. It is presently used by small cargo vessels handling light cargoes. The depth alongside is 5.4m.

Berth No. 4 West (molasses berth) is 264m long, but only about 150m are in adequate condition for working vessels. The berth is used by molasses tankers from shore storage tanks. It is also used for the discharging of coal in bulk, fertilizers, mineral sand, etc. Depth alongside is 9.1m.

Berth No. 5 West (Sea-Land) is 171m long and is used by Sea-Land. The depth alongside is 7.9m.

Berth No. 6 West is 177m long with a 5.4m depth alongside. It is used by tankers for discharging LPG, lubricants, and liquid paraffin to shore tanks.

Berth No. 1 East (Proteinas) is privately owned by Proteinas Nacionales, a large importer of corn and soybeans in bulk. The berth has a maximum permissible loa of 213.3m, with a 9.1m depth alongside.

Berth No. 2 East (Fersan) is used primarily for bulk discharging operations, exporting fertilizers in bags, and also for bulk liquid chemicals. Occasionally the berth is used for discharging bulk grain. This pier is 185m long, with a 9.1m depth alongside.

Berth No. 3 (Falconbridge) is 215m long, with a depth alongside of 9.1m.

Berth No. 4 East is 216m long, with a depth alongside of 8.2m. It is a ro-ro berth.

Berth No. 5 East is 241m long, with a 9.7m depth alongside. Berth No. 6 East (New Container Terminal) is 765m long and used for the handling of containers.

Due to the frequent congestion of other berths, it is also used for bulk cargoes, steel, scrap and cruise vessels.

Refidomsa mooring buoy is used for discharging LPG and refined petroleum products to the shore installations of the Refineria Dominicana de Petroleo. It accommodates vessels up to 152.5m long.

Vessels are docked during daylight hours only and pilotage and mooring crew are compulsory.

Pilotage.—Pilotage is compulsory. The pilot can be contacted using call sign HIW20 on 2738 kHz and 2182 kHz or VHF channels 12 and 16. The pilot boards about 0.6 mile from the breakwater. Night entry and sailing is restricted depending on weather conditions or vessel characteristics.

Anchorage.—It is recommended that vessels anchor off Santo Domingo, as the anchorage at Rio Hana is considered unsafe and only to be used in the case of an emergency.

Santo Domingo (18°28'N., 69°53'W.)

World Port Index No. 11040

7.41 The port of Santo Domingo, the principal port of the Dominican Republic, lies at the mouth of Rio Ozama which flows into the head of Bahia Santo Domingo.

West of the river, the coast is low and rocky, with foothills rising 4 or 5 miles inland. East of the river, a coastal plain extends for 15 or 20 miles. The city is the capital of the Dominican Republic.

Winds—Weather.—Strong onshore winds can cause a rise in sea level considerably above the normal in Bahia Santo Domingo.

It is advisable to put to sea rather than attempt to anchor in the river when the weather is threatening. A heavy sea is liable to cause the anchor to drag, especially if anchored W of the meridian of the signal station.

During the hurricane season, especially after June, vessels must be prepared to leave the anchorage should the trade winds diminish, and a steady wind from NNW or NNE be felt.

Tides—Currents.—The mean spring range here is less than 0.2m. Currents in the river average about 1.5 knots; however, during the rainy season the current is reported to reach a rate of 8 knots.

Rio Ozama creates a counterclockwise gyre within the harbor.

Depth—Limitations.—The entrance channel to the river lies between two partially destroyed breakwaters.

The submerged portions extend about 127m from the E head, and about 0.2 mile from the W head. Caution is advised as the chart shows the dangers to be unmarked.

Another breakwater extends from the W shore, about 0.1 mile N of the W breakwater's root. A spit, which breaks in heavy weather, extends about 0.1 mile SSW of Ponta Torrecilla.

The entrance channel has been dredged to a depth of 10.7m, but the channel is subject to change, especially in the rainy season. The fairway was reported to have a depth of 8.5m. Above the entrance, the river shows charted depths of 2.1 to 10.6m. Two bridges span the channel, each with maximum vertical clearance of 32.5m.

An overhead power cable, with a vertical clearance of 32m, extends across the river, about half way between the bridges. Another bridge, with a vertical clearance of 28.5m, lies about 3 miles above the E breakwater.

The W bank of the river has nearly 0.7 mile of wharves, with depths of 5.5 to 10.3m. A tanker berth is situated on the W bank, and another is situated along the inner side of the E breakwater.

The maximum draft for tank vessels is reported to be 9.6m. Cargo vessels are reported to be restricted to drafts of 7.9m if fitted with long booms, or 7.3m with short booms.

Four piers are reported to extend from the shore from a position about 0.3 mile N of the front light. The piers form a berth which is reported to be 150m in length, and has a depth of 9.4m; grain silos stand at the berth.

A cruise ship pier, with an alongside depth of 9.1m, is situated 0.1 mile S of the front range light.

Aspect.—The objects listed below are conspicuous from seaward, while their positions are given relative to Punta Torrecilla:

- 1. A tank painted red and white checkerboard,—5.5 miles ENE.
 - 2. A white obelisk—1 mile W.
 - 3. A monument—about 0.7 mile WNW.
 - 4. A large statue—bearing 302°, distant0.6 mile.
 - 5. A flagstaff—0.4 mile NNE.

Santo Domingo Light, a tower painted with black and orange diagonal stripes stand on the point and is also conspicuous from seaward.

Pilotage.—Pilotage is compulsory and should be ordered through the vessel's agent at least 72 hours in advance, confirming 24 prior to arrival. The pilot boards from a small blue launch, 1 to 1.5 miles S of the breakwater and can be contacted by VHF channel 16 and 12 and on 2738, 2638, and



Santo Domingo

2182 kHz. The port may be entered from 1000 to 0300 hours daily. A signal station, from which storm signals are displayed, is located about 0.6 mile NW of Santo Domingo Light.

Anchorage.—A charted anchorage area is centered about 0.5 mile WSW of Santo Domingo Light. The area shows depths of 12.5 to 16.1m, with the bottom quality unknown. Vessels anchoring in the river do so N of the signal station. If anchoring on the E side of the channel, vessels should do so with both head and stern anchors out, and with lines run to the shore; the object is to haul the vessel out of the channel.

Directions.—Range lights, aligned 047°, mark the entrance channel, but are moved to meet the changes in the channel; however, it has been reported (1997) that the range is not moved.

Caution.—Vessels are urged to contact the local authorities and the pilot for the latest information on the approach channels, depths, berths, anchorages, etc. before planning a voyage here.

7.42 Andres (Boca Chica) (18°26'N., 69°38'W.) (World Port Index No. 11035), a small community with a deep-water port, lies about 15 miles E of Santo Domingo.

The port stands at the head of a small bay which is quite unencumbered for the most part. It handles ro-ro and container traffic.

The port consists of a basin 0.2 mile long and 0.1 mile wide with wharves on its NW and NE sides, and protected on its SW side by a reef which has been reinforced to form a breakwater. This basin, entered by a channel through the W part of the reef, is located in the NW part of the bay.

The village of Andres has a sugar factory, with a conspicuous chimney, marked by a red obstruction light, with the name BOCA CHICA painted prominently on it.

A radio mast, also marked by a red obstruction light, stands about 0.5 mile SSW of the chimney.

Range lights situated on the S side of the port lead to the entrance channel when in line bearing 300°.

Each light is exhibited from a metal tower. The channel is marked by buoys on each side. The channel was reported dredged to 10.7m.

A 1.8m patch lies close NNE of the front leading beacon.

Pilotage.—Pilotage is compulsory. Pilots and officials board 1 mile outside the harbor entrance. The port is under the jurisdiction of the Commander of the Port, Santo Domingo. Vessels should radio their ETA 24 and 12 hours prior to arrival. Vessels can enter and leave only during daylight hours. There are no tugs.

Anchorage.—Anchorage can be obtained off the port in 21.9m, close SE of the entrance to the channel. The bay is poorly sheltered from the prevailing winds and a heavy swell that sweeps in. Vessels should not anchor E of the entrance range.

7.43 San Pedro de Macoris (18°27'N., 69°19'W.) (World Port Index No. 11030) lies on the E bank of the mouth of the Rio Macoris, and is one of the largest exporting ports in the Dominican Republic.

The greater part of the river is encumbered with shoals, and the channel silts up and requires dredging from time to time.

The channel shows charted depths of 6.1 to 9.4m; however, it has been reported that the largest vessel accommodated is 198m long with a 7.9m draft.

Depths—Limitations.—Berth No. 1 is 0.5 mile long with about 200 to 250m occupied by a floating dry dock, Dominican naval vessels, and other equipment. It is used primarily to load sugar for export, and also is used for loading molasses in bulk and discharging bulk petroleum.

Berth No. 2 is 183m long and is used for the export of molasses and the discharging of bulk clinker and coal. After recent dredging, the draft is now 7.9m; however, experience shows the maximum safe draft to be about 7.4m.

Berth No. 3 (Ferquido) is 183m long and is used for discharging bulk fertilizers and general cargo. Maximum draft is 6.7m with a soft mud bottom.

Pilotage.—Pilotage is compulsory. The pilot boards 0.5 mile seaward of the outermost buoy.

Entry is recommended before 1100 hours, as there is decreased swell in the channel entrance. The pilot can be contacted on 2182, 2738 and 2638 kHz or VHF channels 12, 16.

Anchorage.—The recommended anchorage is about 0.5 mile S of Punta Pescadero, which shows a light.

Anchorage inside the river is available, but limited by depth and swinging room. The pilot's call sign is "HIW 19."

Rio Macoris to Cabo Engano

7.44 Between Rio Macoris and La Romana, about 20 miles E, the coast continues low and flat. It is faced for much of its length by a low escarpment interrupted here and there by sandy beaches, usually at river entrances.

Inland, the terrain is extensively planted in sugar cane and grown over with scattered stands of trees.

Rio Soco (18°28'N., 69°12'W.) enters the sea about 6 miles E of Rio Macoris. The river is obstructed by a shallow bar and is only available for boats.

A vessel with local knowledge may obtain anchorage in a depth of 9.1m, with the mouth of the river bearing between 011° and 022°, but is exposed to the trade winds.

Small vessels may anchor closer inshore.

Isla Catalina (18°21'N., 69°00'W.) lies about 11.5 miles ESE of the mouth of Rio Soco and about 4 miles SW of the entrance to Rio Romana. The island is covered with trees and scrub, and its N part is low and flat. A light is shown from the SE tip of the island at Punta Berroa.

The channel between the island and the mainland can be used by vessels with local knowledge. Fairly good anchorage, in depths from 6.4 to 21.9m, may be obtained off the NW side of the island.

7.45 La Romana (18°25'N., 68°57'W.) (World Port Index No. 11020) lies at the mouth of Rio Dulce. The shore on either side of the entrance is fringed by shoal water.

Depths—Limitations.—The entrance channel and dock are dredged to a depth of 8.5m; the maximum length of the dock is 182.8m. Maximum draft is strictly enforced by the pilot and other authorities, as obstructing the entrance channel is dangerous.

Central Romana Wharf is situated on the W side of the river, close within the entrance. It has a length of 220m with depths of 9.8 to 11.3m alongside.

By day, vessels are turned before berthing at this wharf; at night, vessels proceed straight alongside and when leaving are towed out of the harbor by a tug.

The Government Wharf, on the same side of the river but farther N, has depths of 1.5 to 1.8m alongside.

Aspect.—A sugar mill on the W side of the river is a conspicuous mark at night, at which time its lights are reported visible for a distance of 20 miles.

A light is shown on the E side of the entrance to the river.

Pilotage.—Pilotage is compulsory and not less than 24 hours notice is required. Pilots meet vessels 1.5 to 2 miles off the mouth of the river in a small white motor boat displaying a blue flag.

Pilotage is available during daylight hours only. The signal for a pilot is three long blasts. Pilots may be reached on VHF channel 16, call sign "HIW9" or by radiotelephone on 2182 kHz, 2638 kHz, or 2738 kHz.

Anchorage.—A vessel may anchor in mid-stream in depths of 10.7m abreast Central Romana Wharf or in depths of 7m abreast the Government Wharf, but it may be necessary to lay

out hawsers to the shore because of the narrowness of the channel. There are mooring posts on both sides of the harbor and mooring rings on the E side opposite Central Romana Wharf.

There is a sheltered anchorage for small craft in a bight on the E side of the river about 0.1 mile within the entrance, in depths of about 4.9m.

Caution.—Vessels are urged to contact the local authorities and the pilot for the latest information concerning this port and the channel leading to it before planning a voyage here.

Extreme care should be exercised when approaching the river entrance as the channel is extremely narrow and cross-currents are present. Large vessels may be obliged to leave the channel stern first.

The spit extending SE from the W side of the entrance is poorly marked.

Rio Romana to Cabo Engano

7.46 The gentle arc of the coast between La Romana and Punta Palmilla, about 17 miles SE, is faced by a coral escarpment, and continued inland by a gentle wooded slope that rises to an interior plateau.

There are a number of small coves, with sandy beaches, where landings can be effected.

Rio Chavon (Rio Quiabon) (18°24'N., 68°54'W.), the mouth of which lies about 3.5 miles ESE of La Romana, has excellent anchorage in 16.5m in a position off the river entrance, with nearby Punta Minas in range bearing 287° with Punta Aquila.

A 4.1m shoal has been reported in this vicinity. Anchorage may be obtained almost anywhere between Punta Palmilla and Bayahibe, 11 miles NW.

7.47 Isla Soana (18°09'N., 68°40'W.), the largest island off the coast of the Dominican Republic, lies about 17 miles SE of La Romana. The island is quite low and wooded, and rather difficult to make out, particularly at night.

The S side is foul for the most part, largely without anchorage and frequently visited by strong currents. The island is reported to lie about 2.2 miles ESE of its charted position.

A light (reported extinguished) is shown on Punta Cana, the SE extremity of the island.

A light (reported extinguished) is shown on Punta Laguna, the SW extremity of the island.

Good anchorage, well sheltered from E winds, may be obtained in depths of 8.2 to 9.1m, W of Punta Catuano, the NW extremity of the island.

Caution is advised as an area with depths of less than 20m extends about 5 miles SE, 3.5 miles S, and 7 miles W of Punta Cana. Breakers are also present in the area.

Bahia Catalinita (18°11'N., 68°41'W.) lies between Isla Saona and the mainland. The bay is shallow except for a narrow channel through its S part, which is available for vessels of not more than 3.7m draft. The E end of the bay is nearly closed by a reef that extends 2.7 miles SE from Punta Algive.

Isla Catalinita, covered with vegetation and a few trees, is located on the middle of the above reef. A stranded wreck lies on the SE side of Isla Catalinita.

Bahia Yuma (18°21'N., 68°35'W.), a small deep-water bay, lies about 9 miles N of Punta Algive. Cabo Falso, the W entrance point of the bay, is conspicuous from the S.

A light is shown from the head of the bay.

Anchorage is available in 22m, good holding ground, 0.5 mile off the mouth of the Rio Yuma at the head of the bay. A conspicuous notch in the hills at the head of the bay is a useful mark when approaching the anchorage.

Between Bahia Yuma and Cabo Engano the coast is low and thickly wooded. There are high bluffs some distance inland, which from a distance of 9 or 10 miles appear to be part of the coast. Punta Espada was reported to be a good radar target up to 18 miles.

7.48 Cabo Engano (18°37'N., 68°20'W.), the E extremity of Hispaniola, is a low, long, wooded point. Two small hills near the cape are conspicuous from the ENE for a distance of 18 miles. The light is reported to be a good radar target for about 15 miles. A conspicuous light was reported 4.5 miles SSW of Cabo Engano Light near Punta Borrachon.

Reefs, marked by breakers, extend 0.5 mile NE from the cape, and caution is necessary when approaching it, as a strong W set is often experienced off the coast in this vicinity.

A bank, with depths of less than 200m, and having a depth of 51m near its outer edge, extends 23 miles ESE from Cabo Engano. There is a heavy swell over the bank and strong tiderips along its edge, caused by the current and tidal streams, mark its position.

A number of stranded wrecks lie in the vicinity of Cabo Engano. A stranded wreck, which is conspicuous both visually and on radar, lies 11 miles NW of Cabo Engano.

For a description of Mona Passage (Canal de la Mona) lying E of Hispaniola, see U.S. Coast Pilot No. 5.

Cabo Engano to Bahia de Samana

7.49 Between Cabo Engano and Punta Mangle, in the entrance to Bahia de Samana, about 54 miles NW, the coast is commonly low-lying close inland and largely wooded. This part of the coastline is fringed by a narrow margin of sunken and awash dangers. There are no really safe anchorages along this stretch of coast.

From November to April, the trade winds blow strongly from the E.

Puerto Macao (18°47'N., 68°32'W.), small bay, lies 15 miles NW of Cabo Engano. There is anchorage for vessels with local knowledge both inside and outside the coastal reef. There is no opening or safe anchorage between Puerto Macao and Cabo Rafael, 26 miles NW. Shoaling has been reported about 4 miles E of Punta Macao. A light is shown on Punta Nisibon, 10 miles ESE of Cabo Rafael.

Bahia de Samana

7.50 Bahia de Samana (19°10'N., 69°25'W.) is entered between Punta Mangle and Punta Balandra, 9.5 miles NNW. Surveys have shown considerable changes in the depths in the

entrance to the bay; caution is necessary when navigating in this area.

The buoyage has been substantially altered: several buoys are reported missing and the charted positions of others are unreliable.

The outer half of the bay is encumbered with shoals, the position of which can best be seen on the area chart. There are several deep and tortuous passages through these reefs, but none is suitable for navigation.

The only safe channel into the bay is close to its N shore, N of Cayos Levantado, which has a least draft of 11m and may be followed to Sanchez at the head of the bay.

The channel is marked by buoys.

Tides—Currents.—An outward set of 1.5 to 3 knots may be experienced in the rainy season.

Pilotage.—Pilotage is compulsory. Send ETA and request for a pilot through the agent. The pilot boards at the seaward end of the entrance channel as shown on the chart. It is recommended not to enter the bay at night.

Anchorage.—Vessels may anchor between Cayos Levantado and Punta Balandra. This anchorage is somewhat sheltered from N winds, but the swell makes the berth uncomfortable for small vessels. Anchorage may be obtained by vessels with local knowledge, between Punta de las Flechas and Cayo Chico, or in the W part of Bahia Carenero, which is used mainly by small vessels.

7.51 Santa Barbara de Samana (19°12'N., 69°20'W.) (World Port Index No. 11000) is a small port where cargo operations are carried out by the use of lighters. Pilotage is compulsory and pilots meet vessels just outside the harbor entrance. Anchorage may be obtained at the head of the port in depths of 7.3m. The holding ground is good, but space is restricted.

Puerto Botado (Puerto Batadero) (Puerto Duarte) (19°12'N., 69°27'W.) lies about 2.5 miles WNW of Punta de los Corozos. The entrance channel is well marked by several buoys.

The port consists of a finger pier 230m long and 25.5m wide, depth alongside of 9.1m. It is constructed on cement pilings and pre-stressed concrete slabs. The pier can accommodate vessels on each side.

The access ramp connecting to the pier and the shore is 350m long by 13.5m wide. Mostly refrigerated and dry cargo containers are now handled, although occasionally palletized and loose cargo is moved.

7.52 Sanchez (19°14'N., 69°37'W.) (World Port Index No. 11010) lies in the NW corner of Bahia de Samana, about 10 miles W of Puerto Botado.

Pilotage is not compulsory, but is available. A light is shown on the head of a pier, near the SW part of Sanchez.

Good anchorage may be obtained 0.7 mile S of the town in depths of 12.8m, with Punta Gorda bearing 078° and the pier bearing about 331°, good holding ground clear of the charted submarine cable.

Anchorage is safe for vessels up to a 9.1m draft. Cargo is handled by lighters at the anchorage.

Cabo Samana to Puerto Plata

7.53 Cabo Samana (19°18'N., 69°09'W.) lies 8.5 miles NNE of Punta Balandra and forms the E extremity of Peninsula de Samana. A light is shown on the NE side of the cape.

The coast between Cabo Samana and Punta Balandra is bold and rocky. A small reef, marked by breakers, extends a short distance N from Cabo Samana.

Bahia de Rincon (19°18'N., 69°11'W.) is entered between Cabo Samana and Cabo Cabron, 5 miles NW.

The bay is exposed to the NE and is of no value to shipping. A group of above-water rocks lie in the middle of the bay. Cabo Cabron terminates in a conspicuous white cliff. A conical peak lies 4 miles to the SW.

Bahia Escocesa (19°25'N., 69°35'W.), lying between Cabo Cabron and Cabo Frances Viejo, 45 miles NW, is a wide coastal indentation or bight without any natural shelter against prevailing trade winds. The coast between Cabo Cabron and Puerto Jackson, 25 miles WSW, is fringed with reefs, the outer limits of which have not been determined and should not be approached within 3 miles.

Cabo Frances Viejo (19°40'N., 69°56'W.) is a broad headland, which is faced by a broken series of cliffs and sandy beaches and backed by the gradually rising slopes of a mountain spur; it is reported visible on a clear day at about 30 miles. A lofty mountain, which rises 20 miles SSW of the cape, is prominent.

This light was reported (1991) extinguished. Caution is necessary when in the vicinity of the cape. A violent submarine disturbance was observed (1946) about 2.5 miles NE of the light. It may have caused a change in the sea floor in the surrounding area.

7.54 Bahia Cabarete (19°45'N., 70°24'W.) lies 27 miles WNW of Cabo Frances Viejo. The bay is protected by reefs to the E and W; both are marked by breakers. The entrance is not marked and local knowledge is necessary.

The depths in the anchorage are from 6.4 to 7.3m and the holding ground is poor.

Puerto Sosua (19°46'N., 70°31'W.) (World Port Index No. 10990) lies about 6 miles W of Bahia Cabarete. The port is situated in a bight on the W side of Cabo Macoris.

It is exposed to N winds, but small vessels with local knowledge anchor on the N side in depths of 36.6m, mud, with good shelter from E and NE winds. There are depths of 0.9m alongside a pier on the N side of the bight.

There are two mooring buoys, N of a reef, that lies in the center of the bight. An aero light stands about 2.5 miles W of Puerto Sosua.

Puerto Plata (19*48'N., 70*42'W.)

World Port Index No. 10980

7.55 Puerto Plata lies about 10 miles WNW of Puerto Sosua, and is entered between Punta Fortaleza and Punta Cafemba. A light is shown from a position 0.1 mile SE of Punta Fortaleza.

Range lights stand at the head of the bay and, when in line bearing 218°, they lead through the entrance channel.

A least depth of 10.3m was reported over the bar close W of Punta Fortaleza, with a depth of 9 to 10.6m in the harbor. However, the harbor is liable to silting and outside the limits of the buoyed area it is very shallow.

Owen Rock, 7.2m high, is located on the outer edge of the foul ground N of Punta Cafemba. An isolated 10m patch lies about 0.3 mile SE of the rock.

Winds—Weather.—Winds out of the NE predominate in spring and summer, and out of the ENE in winter.

Winds out of the N are rare, but high swells from the N and NE are common between October and May.

Tides—Currents.—Ocean currents generally set W. Tidal currents are negligible. River discharge into Puerto Plata during the rainy season can establish a significant current, which at times extends as far as 0.5 mile to sea.

Depths—Limitations.—Berth No. 1 (new) is on the E side of the new finger pier and is 282m long, 44m wide, with a maximum draft alongside of 9.1m. Two or more vessels may occupy this berth, including cruise ships.

Berth No. 2 (new) is on the W side of the new finger pier and is 282m long, 44m wide, with a maximum draft of 7.3m (outer), 5.4m SW (inner), shallower away from the dock to as little as 4.2 to 4.5m at about 30.4m from the dock. Two or more vessels may occupy this berth depending on their length, including container ships.

Berth No. 3 (new) is located at the tip of the new finger pier and can accommodate vessels up to 76m long with a maximum draft of 7.3m.

Berth No. 1 (old) is on the W side of the "old" finger pier and can accommodate vessels up to 182.8m long. The pier is in poor structural condition and is not presently being used except as a lay berth. Maximum draft is 9.1m.

Berth No. 2 (old) is located on the E side of the "old" finger pier and can also accommodate vessels up to 182.8m. The berth is rarely used except by tankers discharging fuel and diesel oil for the local utility company, and as a lay berth. Depth alongside is 9m.

Aspect.—Pico Isabela de Torres stands about 2 miles S of the port and is prominent with a large white patch on it. Four or 5 miles W of the patch are a number of sugar-loaf peaks.

A cable railway, marked by lights, runs to the summit, on which there is a conspicuous monument.

A conspicuous white obelisk, 15m high, stands 0.7 mile SE of Fuerte de San Felipe. Three radio masts, from which obstruction lights are exhibited, stand 1.5 miles SE, 2 miles ESE, and 3 miles ESE, respectively, of Punta Fortaleza. A conspicuous chimney stands about 0.2 mile SE of Punta Fortaleza.

A stranded wreck, lying 0.3 mile NNW of Punta Fortaleza, provides a good landmark.

Shoal patches of 1.8 to 3m lie about 0.2 mile NNE and 0.1 mile NW of Punta Fortaleza.

Pilotage.—The pilot, call sign "HIW8," can be contacted on 500 and 8641 kHz or VHF channels 12 and 16.

The pilot boards 0.5 mile from the sea buoy. No entry or departure at night is permitted. The pilot boat is black and flies a blue flag with a white "P."

Anchorage.—Vessels anchor outside the port in about 22m in an unsheltered position, with Punta Fortaleza light bearing 180° and Owen Rock bearing 281°. They also anchor in 8.5m,

good holding ground, in a position about midway between Puerto Plata E and W entrance points; however, there is generally a swell here. Pilots will advise as to the best anchorages.

Caution.—Depths inside the port may be less than charted because of silting. Punta Fortaleza light is apparently displayed at random. The entrance range beacons are difficult to make out because of untended vegetation in this area.

Puerto Plata to Monte Cristi

7.56 Punta Patilla (19°54'N., 70°50'W.), 10 miles NW of Puerto Plata, is long and low, sloping gradually to its extremity, which is marked by a prominent hummock.

A reef extends 0.5 mile from a point 1 mile W of Punta Patilla. A light is shown on the point.

Puerto Cambiaso is situated 2.5 miles W of Punta Patilla.

Cabo Isabela (19°56'N., 71°01'W.) lies about 10 miles W of Punta Patilla and is considered the N extremity of Hispaniola. It is broad, hilly, and thickly wooded headland and has the appearance of an island when viewed from the W. A coastal reef extends 0.6 mile seaward from the NW side of the cape.

Bahia Isabela (19°53'N., 71°07'W.), W of Cabo Isabela and fronting on Rio Bajabonico, has anchorage in 8.2m, good holding ground of sand and mud, in a position with Punta Debhora bearing 048°, distant about 1.5 miles.

The anchorage is well-sheltered from prevailing E winds, but open to the N and W. Caution is necessary because of sunken rocks and an irregular bottom.

The coast between the W side of Bahia Isabela and Punta Mangle, 16 miles W, forms a bay which is encumbered with numerous shoals and reefs that extend offshore for a distance of about 2.5 miles in places.

This area should be avoided by vessels without local knowledge.

7.57 Punta de la Granja (19°53'N., 71°39'W.) lies 9 miles W of Punta Mangle and shows a light. The point is a bold headland on which the prominent hill of El Morro de Monte Cristi rises to an elevation of 251m. The flattened summit of the hill gives a distinctive appearance, and is a good landmark when approaching from the W.

A light is exhibited from a white metal tower on a square base near Punta Granja.

Bahia Jicaquito (19°54'N., 71°38'W.), located immediately E of Punta de la Granja, is shallow. A spit, with depths of less than 5.5m and on which the sea always breaks, extends 1.5 miles NW from its E entrance point.

Anchorage may be obtained between Punta de la Granja and the spit in depths of about 8.2m.

Off-lying Dangers

7.58 Banco de Monte Cristi (19°58'N., 71°45'W.), with depths of less than 200m, extends from 1 to 13 miles off the coast between Punta Rucia and Punta Manzanillo, 11 miles SW of Punta de la Granja. Its outer edges are very steep and the depths uneven.

Caution should be exercised when passing over any part of the bank, as uncharted shoals may exist. When navigating this part of the coast, a vessel not calling at Monte Cristi should pass well N of the bank.

Bancos Granja (20°01'N., 71°36'W.), with depths of less than 18.3m, lie near the outer edge of Banco de Monte Cristi, 7 miles NNE of Punta de la Granjo. Bajo de Monte Cristi, with least depth of 11m, lies 8.5 miles NW of Punta de la Granjo.

Liverpool Shoal, with least depth of 4.6m, lies about 3 miles NW of Punta de la Granja. There are a number of shoal heads within a distance of 0.7 mile of this shoal.

Phaeton Shoal (19°56'N., 71°41'W.), with a least depth of 5.9m, lies 2.5 miles NW of Punta de la Granja, close SE of Liverpool Shoal. Saxonia Shoal, with a least depth of 5.5m, lies 6.5 miles WNW of Punta de la Granja.

Siete Hermanos (19°53'N., 71°47'W.) are a number of low cays, most of which are overgrown with mangroves, and lie on the SW part of Banco de Monte Cristi.

Cayo Arenas, which shows a light, lies to the W of Siete Hermanos.

Bahia de Monte Christi

7.59 Bahia de Monte Cristi (19°53'N., 71°40'W.) is an indentation in the coast between the W end of Punta de la Granja and the mouth of Rio Yaque del Norte, 2.7 miles SSW. Isla Cabra, which shows a light, lies near the N entrance point of the bay. The head of the bay is encumbered with shoals, for which the chart is the best guide. Pilotage is compulsory. Pilots board vessels N of Isla Cabra.

Anchorage may be obtained in depths of 11m, with the town clock tower in line with a small house at the root of the town jetty bearing 147°, and the W extremity of Isla Cabra bearing 035°.

Monte Cristi (19°52'N., 71°39'W.) (World Port Index No. 10970) is a small community and local administrative center lying about 1 mile inland from the head of Bahia de Monte Cristi. It is joined by a causeway that passes over a region commonly flooded after heavy rain or HW.

Monte Cristi to Cap Haitien

7.60 Bahia de Manzanillo (19°45'N., 71°46'W.) lies about 5 miles SSW of Bahia de Monte Cristi and is entered between Punta Manzanillo and the mouth of Riviere du Massacre, 3.5 miles S.

The land around the bay is low and fringed with mangroves. Good anchorage may be obtained in the bight E of Congress Point, the SE end of Punta Manzanillo, in depths of 10 to 13m, mud. There is reported to be good anchorage with the pier head bearing 160°, distant 2.5 miles.

7.61 Pepillo Salcedo (Puerto Manzanillo) (19°43'N., 71°45'W.) (World Port Index No. 10960) lies on the S side of Bahia de Manzanillo and close E of the mouth of Riviere du Massacre.

Depths—Limitations.—The port consists of one concrete finger pier about 228m long with a water depth about 11.5m at the end of the pier and 6.1m near the land. Facilities have been steadily deteriorating to the point that the concrete pier has several holes and cracks. The port is not frequently used by commercial cargo vessels, but fruit is still exported in small

quantities. The pier is reported to be a good radar target up to 15 miles.

Pilotage.—Pilotage is compulsory and available night and day. The pilot can be contacted on 2738 and 2182 kHz as well as VHF channels 12, 16. The pilot boards about 1 mile N of the pierhead. The prevailing winds are from the E, and they sometimes interfere with going alongside or leaving the pier.

A light is shown on the end of the pier. A water tank, 0.7 mile SW of the pier, and two oil tanks, 0.3 mile SE of the pier, are good landmarks.

The mouth of Riviere du Massacre is the N end of the boundary between the Dominican Republic and the Republic of Haiti.

7.62 Baie de Fort Liberte (19°42'N., 71°51'W.) is a land-locked basin, 5 miles long E to W, and 1 mile wide. The entrance to the bay lies about 6 miles W of the pier in Puerto Manzanillo.

The entrance to the bay, which has a depth of 23.8m, is narrow and a little more than 137m wide at its N end. The best time to enter the bay is in the morning before the sea breeze sets in.

Two hills, located 0.5 mile apart, 3.5 miles W of the entrance, are conspicuous above the low-lying land between them and the sea, and form an excellent landmark. The entrance can be distinguished from the N by a break in an otherwise white sandy beach. The entrance can be seen on radar from about 8 miles.

A pier is situated 0.1 mile N of Pointe Brisson, on the W side of the entrance channel. Several mooring buoys lie within 0.1 mile S of the pierhead. Some tanks stand on the W side of the entrance channel close to the root of the pier.

Pilotage is compulsory. Vessels embark pilots in a position about one mile seaward of the entrance. The bay is entered only during daylight hours.

Vessels must use caution because of the sharp turns in the entrance fairway, however; a modern vessel of moderate dimensions and power should have little difficulty in navigating the entrance channel.

7.63 Fort Liberte (19°41'N., 71°50'W.) lies on the S side of Baie de Fort Liberte. Cargo is loaded from lighters to vessels at anchor, particularly bales of sisal. A berth is available 0.3 to 0.6 mile E of Ile Bayau, in depths of 21.9m. However, the port was reported closed to shipping.

Anchorage within the bay may be taken in several positions; the holding ground is reported to be excellent.

Anchorage is also taken in Mouillage Bradford, NW of Ilot Bayau, in a depth of 20.1m. Anchorage may also be obtained 0.3 mile ENE of the ruins of Fort Liberte, in a depth of about 16.5m, but care is necessary because of the nearby shoals.

The coast between Baie de Fort Liberte entrance and Pointe Jacquezy, about 8 miles W, is low with a sandy beach, fringed with reefs, and backed by mangroves.

At Pointe Jacquezy, the coast recedes S and forms the E side of Baie Caracol.

Passe Caracol leads through the barrier reef and into Baie Caracol. This pass is narrow and intricate, with a least depth of 24m in the fairway. A channel, marked by buoys and beacons, leads through Passe Caracol, to an anchorage in Baie Caracol.

Cap-Haitien (19°46'N., 72°12'W.)

World Port Index No. 10930

7.64 Cap-Haitien, a peninsula-like formation, lies 10 miles W of Passe Caracol. The port is situated on the E side of Cap-Haitien, which forms the W side of Baie du Cap-Haitien.

The port is protected from the E by sandbanks and extensive reefs on which the sea usually breaks, and from the N by the shoals in the center and outer part of the port.

Depth at the entrance is 36.6m. Depth on the bar is 3.6m and in the harbor it is 17.6m. Depths in the port are sufficient to accommodate large vessels.

Winds—Weather.—A land breeze commonly blows all night while a sea breeze regularly blows by day. Winds out of the N cause a sea within Baie du Cap-Haitien.

Northeast winds may reach force 6 by afternoon, causing a vessel wishing to leave the pier much trouble.

Tides—Currents.—Currents are commonly W. An E set sometimes occurs, particularly after several days of N to NW winds, and trends onto Cap-Haitien. A river at the head of the bay discharges a current of up to 4 knots during the rainy season.

Depths—Limitations.—New berthing facilities have recently been constructed providing a berth 176m long reserved for cruise ships, with a depth alongside of 10.5m.

Cargo vessels have a berthing space of 250m with a draft of 9.5m, this being an extension of the existing pier.

An area at the end of the port basin has been reserved for local trading and coastal shipping with a berth length of 100m and a depth alongside of 3.5m.

Aspect.—When approaching the port from the N, three prominent peaked hills can be seen some distance S of the port.

The extensive ruins of a castle stand on the summit of one of the hills. The cathedral has a prominent roof. A number of landmarks can best be seen on the area chart.

Pilotage.—Pilotage is compulsory for merchant vessels and should be ordered through the port captain's office at least 48 hours prior to arrival. The message should also include the vessel's particulars, requirements, and cargo details.

Vessels embark the pilot about 1 mile NNE of Pointe Picolet. The pilot can be contacted on VHF channel 16.

The day signal for pilot is one blast on the whistle and at night three flashes from a white light.

Directions.—Approach from the west until the new Picolet Light bears 130° to 190°. From the E, having passed Monti Christi shoal, stand to the W until the highest part of Haut du Cap bears 225°, and steer towards it.

When Picolet Point Light is sighted, stand in for the entrance. When the N extremity of Cap Haiten bears 270°, the vessel will be abreast the N end of the reef. Buoys and beacons marks the entrance channel and the anchorage area. The passage W of Le Grande Mouton and E of Mardi Gras reef via the buoyed channel is preferred. Passage E of Le Grande Mouton is not recommended.

Anchorage.—Anchorage is available throughout Baie du Cap-Haitien inner part, but the holding ground is poor.

Vessels anchor best in a position with Pointe Picolet bearing 353°, about 1 mile off. Two anchor berths, designated B and C, are best seen on the chart.

Cap-Haitien to Port de Paix

7.65 Baie de l'Acul (19°45'N., 72°20'W.) is entered between Pointe des Trois Maries and Pointe du Grand Boucan, 1 mile W. The bay lies about 7 miles WSW of Cap-Haitien.

The bay is well-protected by the shoals off its entrance, and affords excellent, sheltered anchorage for vessels of deep draft.

The seaward approach to the bay lies between Pointe Honorat and Pointe du Limbe, about 8 miles WNW. The intervening seaway is encumbered by sunken dangers, some of which break, and by several islets or above-water rocks which can best be seen on the area chart.

Three channels through the reefs give access to Baie de l'Acul, namely Chenal de L'Est, Chenal du Milieu, and Chenal du Limbe, the principal channel. Chenal de L'Est should not be attempted unless the reefs can be seen from aloft. Chenal du Melieu is not recommended.

Good temporary anchorage may be obtained N of Pointe des Trois Maries, in depths of from 12.8 to 29.3m.

Excellent sheltered anchorage may be obtained in Anse de Lombard, in depths of 9.1 to 11m or farther out in depths of from 11 to 12.8m. Local knowledge is essential.

Baie Fond la Grange (19°52'N., 72°31'W.) lies about 7.5 miles WNW of Pointe du Limbe and is entered between East Point and Pointe Palmiste, 0.5 mile W.

The shores of the bay are steep-to in most places. Good anchorage may be obtained in the middle of the bay in depths of 11 to 13m, mud and sand bottom.

Baie de la Borgne (19°52'N., 72°32'W.) lies on the W side of Pointe Palmiste. The bay affords good anchorage for small vessels with local knowledge in depths of 3.7 to 8.2m, but the bay is open to the N. A village stands at the head of the bay.

Ile de la Tortue

7.66 Ile de la Tortue (Ile Tortuga) (20°04'N., 72°49'W.), the E extremity of which lies about 27.5 miles WNW of Cap-Haitien, is about 20 miles long and 4 miles wide. The E and W extremities of the island are low and its interior is mountainous. The island is reported radar conspicuous at about 26 miles.

A conspicuous red cliff on the S side of the island is reported to be visible at considerable distances. Lights are shown from the island's E and W ends.

Rade de la Basse Terre (Tierra Baja) (20°01'N., 72°42'W.), a settlement on the south coast of the island about 5 miles W of the E extremity of the island, fronts on a small reef-fringed shoal water basin. Large vessels may anchor outside the reefs, 1 mile WSW of the settlement, over a sandy bottom.

Small vessels with local knowledge can obtain anchorage, with shelter from the prevailing winds, close W of Pointe Oiseaux, 3 miles W of the settlement in depths of 5.5 to 7.3m, grassy bottom.

7.67 Port de Paix (19°57'N., 72°50'W.) (World Port Index P No. 10920) lies on mainland, 10 miles SE of the W extremity of Ile de la Tortue. Cargo operations are carried out by the usage of lighters to vessels at anchor. The port is open to the N winds which causes a heavy sea to enter the bay. Pilotage is compulsory. A pilot will come to a vessel in response to a signal.

A jetty near the custom house has depths of 0.9m alongside its head. Anchorage may be obtained in depths of about 36.6m, with the custom house bearing 147° and Pointe Perez bearing 061°.

Baie des Moustiques (19°56'N., 72°58'W.) lies 8 miles W of Port de Paix. It is a deep-water cove with a rocky uneven bottom. An islet lies on the W side of the cove and a sunken rock lies near the islet.

The best anchorage is in the middle of the cove, nearly abreast the sunken rock, in depths of about 36.6m, but the area must be carefully checked before anchoring.

Baie du Port a l'Ecu lies about 4 miles W of Baie des Moustiques and offers the better anchorage.

The bay is sheltered from all but NW winds. It is somewhat encumbered by a sunken reef extending from its remarkable brown colored E entrance point, but elsewhere is clear.

A good anchorage is 0.25 mile S of the E point in depths of 7.3 to 11m.

7.68 Pointe Jean Rabel (19°56'N., 73°10'W.), about 8 miles W of Baie du Port a l'Ecu, is low and bush-covered. The point is conspicuous from offshore. The coast consists of a succession of bold rocky cliffs and sandy beaches, inland of which the country is mountainous and broken into distinct ridges. A village lies SW of Pointe Jean Rabel.

The region between Pointe Jean Rabel and Cap du Mole is both inhospitable because of no shelter, and dangerous because of currents which set generally W and SW or at times NE and in each situation, shoreward.

Vessels are cautioned to stand well to sea when transiting this region, especially at night.

Cap du Mole (19°50'N., 73°25'W.) lies 15.5 miles SW of Pointe Jean Rabel. The cape is the SW extremity of a flat peninsula, connected to the mainland by a low isthmus, which forms the N side of Mole St. Nicolas. Tide rips have been experienced off the cape and the coast NE of it. The coast E of Cap du Mole is described in beginning in paragraph 7.4.